



# Georgia Tech: Innovating Here and Now

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# Powerful trends reshape the world

- High-speed communications / Internet
- End of Cold War political constructions
- Removal of trade barriers
- Terrorist attacks; wars in Iraq, Afghanistan
- Emergence of technology-based economies around the world
- Sustained investment in higher education in nations like India and China

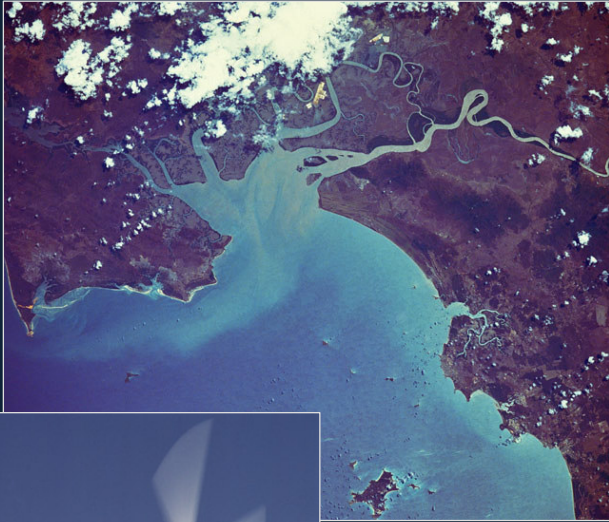
# The world of 2020

- 8 billion people; a 25% increase over 2000
- Balance tipped toward urbanization
- Population in developed nations aging; “youth bulge” in underdeveloped nations
- Of a representative 100 people:
  - 56 will live in Asia
  - 16 will live in Africa
  - 4 will live in the United States

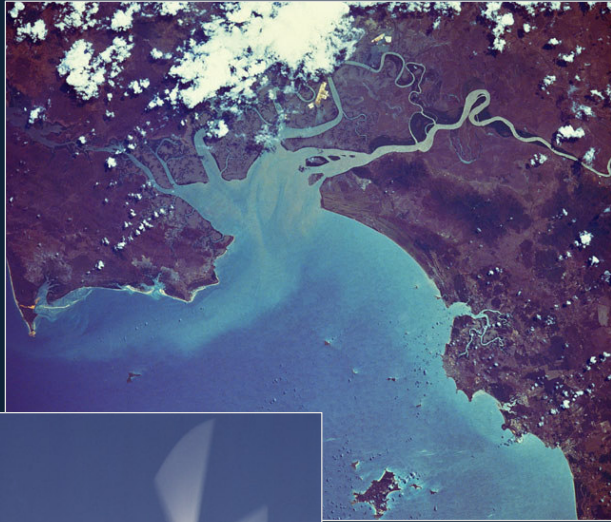


# Future issues

- Water shortages
- Global warming
- Energy demands
- New diseases
- Increased competition for technology sector



# Future issues



- Water shortages
  - Global warming
  - Energy demands
  - New diseases
  - Increased competition for technology sector
- 
- Biotechnology revolution
  - Nanotechnology revolution
  - Sustainable technology



“Just as energy is the basis of life itself and ideas the source of innovation, so is innovation the vital spark of all human change, improvement, and progress.”

Theodore Levitt  
Edward W. Carter Professor Emeritus  
Harvard University



## National Innovation Initiative

- Year-long discussion of how to create an economic environment conducive to innovation
- National Innovation Summit, Washington, D.C., December 14-15, 2004
- Report: “InnovateAmerica: Thriving in a world of challenge and change” ([www.compete.org](http://www.compete.org))
- 30 recommendations to promote innovation



## Optimizing for innovation

- Talent, the human dimension
- Investment, the financial dimension
- Infrastructure, the physical and policy dimension



# Universities as drivers of innovation



- Educate the talent
- Conduct fundamental research that provides discoveries and knowledge
- Promote technology transfer and commercialization



Generating innovation  
at a 120-year old institution





# Vision for Georgia Tech

Define the technological  
research university of the  
twenty-first century

# Interdisciplinary degrees

- Human-computer interaction
- Bioinformatics
- Quantitative and computational finance
- Prosthetics and orthotics
- Digital media
- Biomedical engineering



# International programs

- Study Abroad: a third of undergraduates
- Global Learning and Conference Center delivers education around the world
- Global MBA with partner universities in France and Argentina
- Sam Nunn School of International Affairs
- Research and education partnerships:
  - Israel
  - Germany
  - Great Britain
  - Singapore
  - France
  - China

# Innovative Collaborations

- Emory/Georgia Tech Biomedical Engineering
- National Nanotechnology Infrastructure Network
- NSF Centers of Excellence:
  - Tissue Engineering
  - Electronic Packaging
  - Photonics
- The Enterprise Transformation Institute



Sustainable  
technology



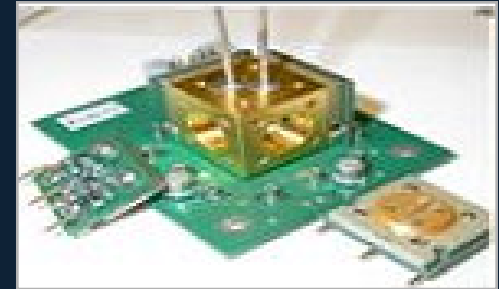
# Interdisciplinary research



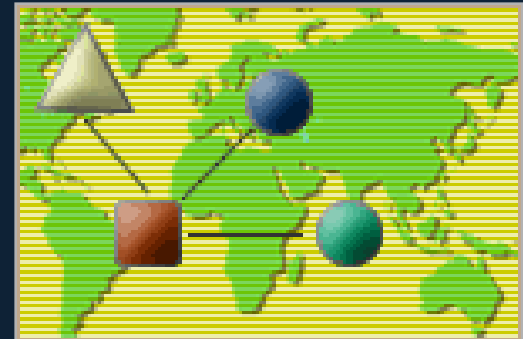
Nanotechnology



Biotechnology/  
nanomedicine



Microelectronics/  
telecommunications



Logistics



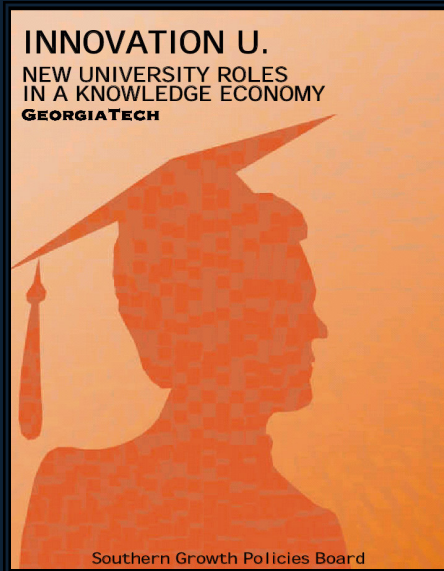
Photonics/optics



Manufacturing



# Technology transfer



“Virtually every combination of industry relationship or economic development activity can be found at Georgia Tech, and in a very real sense the school is an operating partner with Georgia state

partner with Georgia state government.... **Perhaps more than any other research university in North America, economic development is an integral, critical component of the mission of the Georgia Institute of Technology, and this has been true from its very inception.”**

Southern Growth Policies Board  
*Innovation U* study

# Four campuses on three continents



Georgia Tech-Atlanta



Georgia Tech-Lorraine



Georgia Tech-Savannah



Georgia Tech-Singapore



# Creating an innovative campus




Biotechnology Complex



Klaus Advanced Computing Building



Technology Square



“The world leaders in innovation and creativity will also be world leaders in everything else.”

Harold R. McAlindon  
Author and innovative business consultant